

the occluding process should be considered in selecting and dosing antibiotics for the prophylaxis of biliary stent blockage.

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#### Antiretrovirals for Prevention of HIV (invited)

62.001

##### Can Expanded Treatment Slow the AIDS Epidemic? The Public Health Perspective

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The introduction of antiretroviral therapy has changed the course of HIV disease by improving survival rates. But ART has equal potential for prevention, since it reduces the HIV RNA level and the probability of HIV transmission from an infected person to their sexual partners. Currently NIH is undertaking a large randomized clinical trial (HPNT052) in serodiscordant couples to study the effect of antiretroviral therapy in preventing HIV transmission to their partner. Although there have been no randomized controlled clinical trials on the subject, antiretroviral drugs are currently used in clinical practice for post-exposure prophylaxis after inadvertent occupational exposure or after sexual exposure to the virus. The success story in using antiretrovirals for HIV prevention has been shown from trials involving Mother to child HIV transmission interventions. Hence Can Expanded Treatment through the Public Health approach slow the AIDS Epidemic?

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##### Can Expanded Treatment Slow the AIDS Epidemic? The Behavioral Scientist's View

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This presentation explores existing and potential behavioral and social science contributions to consideration of the impacts of expanded antiretroviral (ARV) scale-up on the global HIV epidemic. Behavioral science literature commonly evaluates sexual behavior ("risk compensation") and medication adherence. While such analyses are critical to evaluation of overall impact and will be reviewed here, the presenter seeks to highlight approaches and empirical research that set (and sometimes problematize) such typically individually-based approaches in their social, cultural, political, economic, and human-rights/ethical contexts. It, furthermore, brings behavioral and social science contributions to bear on the critical question of: "how do we define and measure success?" The presentation addresses the ways in which interdisciplinary behavioral and social science work can illuminate key questions about feasibility and sustainability as well as "unintended consequences" of these biomedical interventions on non-biomedical HIV pre-

vention of appropriate methods and criteria to evaluate impacts; 2) assist targeting and revision of patient and community educational materials and involvement strategies; and 3) aid development of uptake, retention and medication and general program adherence schemes that more explicitly address economic, cultural, and social barriers. A systematic analysis of lay media (primarily print sources) about recent ARV scale-up will be used as a case study to demonstrate how social/behavioral science perspectives may shed light on popular conceptions of such programs and technologies, how scientific information is interpreted by media and the general public, and how consequential misconceptions may arise. In the overall presentation, special emphasis is placed on examination of approaches and perspectives that are likely to inform questions and solutions relevant to both ARV treatment and biomedical prevention technologies under testing, particularly implementation of ARV pre-exposure prophylaxis.

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##### Antivirals in Uninfected People: PrEP and PEP

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**Background:** With the exception of male circumcision and some behavioural interventions, randomised controlled trials (RCTs) of HIV prevention interventions have reported disappointing results. In this presentation, data on post-exposure prophylaxis (PEP, the provision of anti-retrovirals (ARVs) after exposure to prevent HIV infection) and pre-exposure prophylaxis (Pre-EP, ARVs provided before exposure to prevent infection) will be reviewed.

**Methods:** A guided literature review on the efficacy, cost-effectiveness, implementation policy and likely public health impact of PEP and pre-EP was conducted.

**Results:** No RCTs examining the efficacy of PEP were identified. Nevertheless, a variety of animal and observational evidence suggests that PEP prescribed within 72 hours of HIV exposure is likely to substantially reduce the risk of HIV transmission. PEP use at the population level is generally not cost-effective, unless its use is highly targeted towards the highest risk exposures. Despite these limitations, policies recommending PEP after sexual and other HIV exposures exist in many settings. Although it is possible that post-EP may prevent cases of transmission, a substantial public health impact on the HIV epidemic is unlikely. RCTs evaluating the efficacy of Pre-EP are currently underway in a number of settings. Animal data strongly suggest that Pre-EP will need to consist of combinations of more than one ARV. The cost effectiveness of Pre-EP will depend strongly on the risk setting. No locations were identified which currently recommend Pre-EP, and there has been little study of the potential public health impact of this preventive intervention.

**Conclusion:** PEP is being increasingly utilized as a form of HIV prevention, despite the lack of any efficacy data from